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10/667,478	09/23/2003	Laurent C. Bissonnette	5221-085-US01	9072

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EXAMINER

LE, BRIAN Q

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2624

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/667,478	Applicant(s) BISSONNETTE ET AL.	
	Examiner BRIAN Q. LE	Art Unit 2624	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 20 October 2009.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-7,9-13 and 15-21 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-7, 9-13 and 15-21 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

Response to Amendment and Arguments

1. Applicant's amendment filed October 20, 2009, has been entered and made of record.
2. The request for the double patenting rejection to be withdrawn (page 5 of the Remarks) was considered but not persuasive because the instant application is not in the condition for allowance due to the maintained rejections (see discussion as follow).
3. The rejection of claims 1-7, 9-13, and 20-21 under 35 U.S.C. 101 is withdrawn.
4. The rejection of claims 2-3, and 9-14 under 35 U.S.C. 112, first paragraph is withdrawn.
5. Applicant's arguments with regard to claims 1-3, 7, 9, and 15-16 have been fully considered, but are not considered persuasive because of the following reasons:

Regarding claim 1, the Applicant argues (bottom of page 7 of the Remarks) that Cameron does not teach "a system or method to identify a club or ball from an acquired image through comparison of that image to a stored library of images". The Examiner respectfully disagrees. Cameron does teach a system/method (see abstract) to identify a club or ball ("...include an analysis of the performance of a golf ball following impact with the golf club..." (page 1, [0010]) from an acquired image ("video camera means") (page 1, [0008]) through comparison (page 4, column 2, [0039]) of that image to a stored library of images (page 2, [0024]).

To further assist the Applicant with the guidance with claim language interpretations so that the Applicant can add further/more details limitations from the specification to the claims to overcome the prior arts, the Examiner is presenting MPEP, section 2111, Claim Interpretation; Broadest Reasonable Interpretation as follow: "The court explained that "reading a claim in light

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of the specification, to thereby interpret limitations explicitly recited in the claim, is a quite different thing from reading limitations of the specification into a claim,' to thereby narrow the scope of the claim by implicitly adding disclosed limitations which have no express basis in the claim." The court found that applicant was advocating the latter, i.e., the impermissible importation of subject matter from the specification into the claim.). See also *In re Morris*, 127 F.3d 1048, 1054-55, 44 USPQ2d 1023, 1027-28 (Fed. Cir. 1997) (The court held that the PTO is not required, in the course of prosecution, to interpret claims in applications in the same manner as a court would interpret claims in an infringement suit. Rather, the "PTO applies to verbiage of the proposed claims the broadest reasonable meaning of the words in their ordinary usage as they would be understood by one of ordinary skill in the art, taking into account whatever enlightenment by way of definitions or otherwise that may be afforded by the written description contained in applicant's specification.")".

Additionally, the Examiner has cited particular columns and line numbers or figures in the references as applied to the claims below for the convenience of the applicant. Although the specified citations are representative of the teachings in the art and are applied to the specific limitations within the individual claim, other passages and figures may apply as well. It is respectfully requested from the applicant, in preparing the responses, to fully consider the references in entirety as potentially teaching all or part of the claimed invention, as well as the context of the passage as taught by the prior art or disclosed by the examiner.

The Examiner believes that all the arguments of the Applicant have been properly addressed and explained. Thus, the rejections of all of the claims are maintained.

Double Patenting

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1. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the “right to exclude” granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

2. Claims 1, 9 and 15 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claim 37 of copending Application No.

10/861,441. Although the conflicting claims are not identical, they are not patentably distinct from each other because claims 1, 9, and 15 are substantially claiming a concept of automatically identifying golf club and golf ball comprising storing reference image information of golf ball and golf club and automatically identifying a club or ball based on a comparison of input image to reference image which claim 37 of Application No. 10/861,441 also substantially disclosed the described concept.

Also claims 1, 9, and 15 of the application recite the open ended transitional phrase “comprising”, does not preclude the method as being performed by an apparatus/method.

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This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-3, 7, and 15-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over the combination of Cameron et al. U.S. Publication No. 2001/0029207 and further in view of Matsugu U.S. Pub. No. 2002/0038294.

Regarding claim 1, Cameron teaches a method for identifying a plurality of golf clubs and golf balls (the process of recognizing swing which include the club and the ball) (page 1, column 1, [0008]; page 1, column 2, [0011] and FIG. 4), comprising:

Storing image reference information (when image is capture, stored and then use for further analysis such as identification and comparison, then it is an image reference) (page 1, column 2, first 10 lines and [0011]) for each of the plurality of golf clubs and golf balls (page 1, column 1-2, [0008]);

Acquiring an image of at least one of said balls and clubs during a swing (page 1, column 1, [0011]) with at least one camera system (FIG. 1, elements 20, 22, 24, and 26); and

identifying (page 3, column 1, [0030]) with a computation device (page 2, [0024]) at least one of said club or ball based on a comparison (page 4, column 2, [0039]) to said image reference information (page 1, column 2, first 10 lines and [0011]).

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Cameron does not explicitly teach the identification process using Eigen values.

Matsugu teaches an image identification processing (pattern detection) (abstract) wherein detecting a pattern/object (FIG. 8, S807) based on comparison to said image reference (template matching) (page 2, [0020]) information using Eigen values (Eigen image function generates Eigen values) (page 1, [0005]).

Modifying Cameron's method of identification according to Matsugu would be able to identify object based on a comparison to said image reference information using Eigen values. This would improve identification processing and therefore, it would have been obvious to one of the ordinary skill in the art to modify Cameron according to Matsugu.

For claim 2, Cameron also teaches the method wherein said automatically identifying (the Kodak Motioncorder Analyzer can process images at 600 frames per second) (page 2, column 1, [0023]) takes about six seconds or less (FIG. 7, ".5000sec").

For claim 3, Cameron also teaches the method wherein said automatically identifying (the Kodak Motioncorder Analyzer can process images at 600 frames per second) (page 2, column 1, [0023]) takes about one second or less (FIG. 7, ".5000sec").

For claim 7, Cameron discloses image reference information is based on inherent features of said balls (performance of the golf ball such as the impact) (page 1, column 2, [0010]) and clubs (dimensions of golf club) (page 1, column 2, [0010]).

For claim 15, Cameron teaches a system for automatically (column 4, column 2, [0040]) identifying a plurality of objects (the process of recognizing swing which include the club and the ball) (page 1, column 1, [0008]; page 1, column 2, [0011] and FIG. 4), comprising:

At least one camera system (FIG. 1, elements 20, 22, 24 and 26); and

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A computational device capable of identifying an acquired image from a library of stored reference information (a computer) (FIG. 1, elements 30, 32 and 34 and page 2, column 2, [0024]).

For claim 16, please refer back to claim 7 for further teachings and explanations.

3. Claims 4-6, 9-13, and 17-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over the combination of Cameron et al. U.S. Publication No. 2001/0029207 and Matsugu U.S. Pub. No. 2002/0038294 as applied to claim 1 above, and further in view of Lawandy et al. U.S. 7,184,569.

Regarding claim 4, Cameron teaches image information can based on a plurality of markers (page 4, column 2, [0040]). However, Cameron does not explicitly teach that markers on image comprise visible ink. Lawandy teaches an object marking process on image (abstract) wherein markers comprise visible ink (visible mark) (column 4, lines 49-55). Modifying Cameron's method of providing marking on reference images according to Lawandy would be able to generate visible mark on images. This would improve processing because it would aid observer to verify the presence of an image to verify characteristics relate to images (column 5, lines 1-5) and therefore, it would have been obvious to one of the ordinary skill in the art to modify Cameron according to Lawandy.

Also to claim 5, Lawandy further teaches markers comprise ink responsive to ultraviolet light (abstract).

Referring to claim 6, Lawandy also teaches the method wherein said visible ink markers comprise limited spectrum markers responsive to one of the colored light (infrared is colored light) (column 7, lines 65-67) and fluorescent light (column 7, lines 33-35).

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Regarding claim 9, please refer back to claims 1-2 and 4 for further teachings and explanations.

For claims 10-13, please refer back to claims 4-7 respectively for further teachings and explanations.

For claim 17, please refer back to claim 5 for further teachings and explanations.

For claim 18, please refer back to claim 4 for further teachings and explanations.

4. Claim 19-21 is rejected under 35 U.S.C. 103(a) as being unpatentable over Cameron et al. U.S. Publication No. 2001/0029207.

Regarding claim 19, Cameron teaches a library of stored reference information (when image is capture, stored and then use for further analysis such as identification and comparison, then it is an image reference) (page 1, column 2, first 10 lines and [0011]) comprises an ability of recording 600 frames per second and stores the data (page 2, column 1, [0023] and page 2, column 2, [0024]). Reasonably, a frame of image can store a golf club and a golf ball (FIG. 4). Thus, it would be obvious that the disclosed device by Cameron able to store more than 200 or more objects from the ability of recording 600 frames per second.

Regarding claims 20-21, the Examiner takes Official Notice that one of ordinary skill in the art who implemented an identification of a golf ball would be able to further identify a plurality of golf balls. This can be done whether sequentially or in parallel. Thus, it would have been obvious to one of ordinary skill in the art to be able to identify a plurality of golf balls from an identification of a golf ball.

Conclusion

1. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Contact Information

1. Any inquiry concerning this communication or earlier communications from the examiner should be directed to BRIAN Q. LE whose telephone number is (571)272-7424. The examiner can normally be reached on 8:30 A.M - 5:30 P.M.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Samir Ahmed can be reached on 571-272-7413. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Brian Q Le/
Primary Examiner, Art Unit 2624
Monday, January 04, 2010